

z/OS System Programmer Fundamentals

Duration: 4 Days Course Code: ES40G

Overview:

This course is designed to describe the basic components that apply to all z/OS systems. It includes high level concepts that apply to the z/OS hardware platform and the z/OS software. It then provides a more detailed analysis, description and lab activities that can be applied to the system programmer role to maintain z/OS systems.

Discussion activities include: The POR, IPL process, JES implementation and operating environment, VTAM environment for TSO, ISPF, SNA and TCP/IP networking, RACF, ISPF/PDF and UNIX System Services. It defines the classic approach to data management in a z/OS system. It identifies various software products and utilities used to define, maintain, and manage catalogs and data sets in the z/OS environment. It also discusses Parmlib usage and requirements for system initialization and operation that include: System symbolics, WLM, SFM, RMF and system logger. Both single system and multi-system sysplex usage is identified. z/OS install, upgrade options, maintenance using SMP/E and I/O configuration requirements using HCD is listed and described.

Target Audience:

This intermediate class is intended for new System Programmers and System Administrators, who require an overall understanding of the z/OS platform, z/OS components, data management, and installation and maintenance activities used in z/OS systems.

Objectives:

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|---|--|
| ■ Describe the basics of z/OS architecture | ■ IDCAMS utility |
| ■ | ■ |
| ■ Identify basic components of a z/OS system | ■ DFSMS: DFSMSdss, DFSMSHsm |
| ■ | ■ |
| ■ Discuss what you have learned about LPARs | ■ Data, storage, and management classes |
| ■ | ■ |
| ■ Describe maintenance principles | ■ Define the hierarchical data management |
| ■ | ■ HFS file system |
| ■ Identify and list the POR process | ■ |
| ■ | ■ zFS file system |
| ■ Describe the IPL process | ■ |
| ■ | ■ Define load-parameters for IPL |
| ■ Identify the basic address spaces | ■ |
| ■ | ■ Define symbols for use in system initialization |
| ■ Describe how to shut down z/OS | ■ |
| ■ | ■ Define a configuration for system initialization |
| ■ Implement a basic JES2 batch environment | ■ |
| ■ Identify how work can be started in z/OS and it's relationship to the job entry subsystem | ■ Define a library for procedures |
| ■ | ■ |

- Describe how JES2 prepares and executes work in z/OS
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- Explain JES2 start options
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- Describe JES2 parameters that can be customized to support z/OS batch
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- Identify how communications and control of JES2 can be done using the operator commands and SDSF
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- Describe JES3 configuration and job processing phases
-
- Identify JES3 start options
-
- Describe the two networking schemes in the z/OS environment: SNA and IP
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- Identify SNA networking resources
-
- Explain how SNA sessions are established
-
- Describe the role of TCP/IP as a physical filesystem in UNIX System Services
-
- Implement and start a local VTAM instance to provide the base for SNA applications such as TSO
-
- Implement and start TSO
-
- Start a TCPIP stack and check accompanying messages
-
- Identify the main functions of Security Server (RACF) and the role it plays in controlling user access to the system
-
- Describe the contents of RACF user, group, and resource profiles
-
- Describe how RACF profiles are used to authorize user access to a data set resource
-
- Identify two key members used for TCAS startup
- Identify the sysplex resources required to run WLM
-
- List the main components that comprise a WLM service definition for a system/sysplex
-
- Describe the function of WLM service definition parameters such as workloads, service goals, periods, and WLM subsystems
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- Describe how SMF data set are created and used
-
- Explain SMF record types and how they are used
-
- Identify the three RMF monitor types
-
- Describe how the RMF monitor is used for reporting purposes
-
- Identify System Logger components and usage for:
- Sysplex configuration and CF logstreams
-
- Single system and DASD-only logstreams
-
- Describe SMF usage of logstreams
-
- Describe the differences between IOCDS and IODF
-
- Identify and list the HCD definition process sequence
-
- Describe how the HCD dialogs are used to define a configuration
-
- Discuss the purpose of Hardware Configuration Manager
-
- Describe the overall concept of SMP/E: Global, target and DLIB zones
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- Describe what elements and SYSMODs are
-
- Create an SMP/E working environment
-
- Identify the batch and ISPF interfaces to SMP/E

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- Name the components of ISPF
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- Describe the general layout of ISPF/PDF panels
-
- Describe how UNIX System Services are used in z/OS
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- Describe briefly the UNIX Shell and utilities and how they are accessed
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- Describe the application services provided in UNIX System Services
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- Describe how security is handled in UNIX System Services
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- Describe the classical z/OS data management
- DASD init: VTOC, VTOC index
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- ICF catalog creation: BCS, VVDS
-
- MCAT/UCAT
-
-
- Install a user function using RECEIVE, APPLY, and ACCEPT
-
- Explain how to remove a SYSMOD with RESTORE
-
- Describe the installation options available to install z/OS
-
- Use the attributes of z/OS elements and features to identify the contents of a z/OS product
-
- Describe the contents of the ServerPac offering and important install documentation sources
-
- List the main steps in the ServerPac build process
-
- Describe hardware and software prerequisites for performing a ServerPac installation in:
- The driving system
-
- The target system

Prerequisites:

You should:

- Have z/OS installation experience or have attended z/OS Installation (ES41A)
 - Be familiar with end user activities on MVS, including knowledge of JCL, IDCAMS, the MVS address space structure, and the concept of batch scheduling using JES initiators
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ServerPac and other IBM services

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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